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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,162	04/19/2004	Samuel M. Caudell	5326A	2724

7590 04/13/2006

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EXAMINER	
PIZIALI, ANDREW T	

ART UNIT	PAPER NUMBER
1771	

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/827,162	CAUDELL, SAMUEL M.	
	Examiner	Art Unit	
	Andrew T. Piziali	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on 2/2/2006 has been entered.

Specification

2. The disclosure is objected to because of the following informality: The specification has not been updated to indicate that parent application 10/303,195 is now abandoned. Appropriate correction is requested.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 5-8, 12-14 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,557,968 to Thornton et al. (hereinafter referred to as Thornton) in view of USPN 4,771,596 to Klein.

Regarding claims 1, 5-8, 12-14 and 17-18, Thornton discloses a static electricity dissipating woven fabric (12 and 14) and a grid of conductive filament yarns (16, 18 and 19) (see entire document including Figure 1, column 5, lines 4-57, and column 6, lines 10-19). Thornton discloses that woven spun yarns (12 and 14) may form electrically conductive junctions between the conductive filament yarns (see column 5, lines 16-31 and Figure 1).

Thornton discloses that a combination of conductive and non-conductive yarn may be used in the base fabric (column 5, lines 23-31), but Thornton does not appear to specifically

disclose that the yarns may comprise a plurality of electrically conductive staple fibers in spun relation with a plurality of substantially nonconductive natural or synthetic staple fibers wherein the conductive staple fibers are dispersed throughout the spun yarns such that the conductive staple fibers define a network of conductive junctions along the length of the spun yarns and between the spun yarns at locations wherein spun yarns meet. Klein discloses that it is known in the antistatic fiber art to use spun yarns comprising a plurality of electrically conductive staple fibers in spun relation with a plurality of substantially nonconductive natural or synthetic staple fibers wherein the conductive staple fibers are dispersed throughout the spun yarns such that the conductive staple fibers define a network of conductive junctions along the length of the spun yarns and between the spun yarns at locations wherein spun yarns meet (see entire document including column 2, lines 3-16 and column 4, lines 24-46). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the conductive spun yarns from any suitable yarn material, such as the yarn material disclosed by Klein, because the yarn provides antistatic properties, and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics.

Regarding claims 5 and 12, Klein discloses that the spun staple fibers may comprise polyester, cotton or blends thereof (column 4, lines 24-46).

Regarding claims 6 and 7, Thornton discloses that the conductive filament yarns (16, 18 and 19) may comprise non-conductive material in combination with carbon suffused nylon filament (column 5, line 58 through column 6, line 9) and that polyester is a known non-conductive material (column 5, lines 4-22). Thornton does not mention specific weight

percentages, but absent a showing of unexpected results it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the conductive filament yarn with 50% to about 90% polyester and about 10% to 50% carbon suffused nylon filament, because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics and because it is understood by one of ordinary skill in the art that the amount of polyester/carbon suffused nylon determines properties such conductivity and touch, and because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Regarding claims 6-8, 12-14 and 17-18, Klein discloses that spun yarns may comprise metallic or non-metallic conductive staple fibers (column 4, lines 24-46), but Klein is silent with regards to specific non-metallic conductive fibers. Therefore, it would have been obvious to look to the prior art for conventional conductive non-metallic fiber materials. Thornton provides this conventional teaching showing that it is known in the antistatic fiber art to use electrically conductive non-metallic carbonaceous fibers (column 5, line 58 through column 6, line 9). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the conductive staple fibers from carbonaceous staple fibers motivated by the expectation of successfully practicing the invention disclosed by the prior art and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics.

Regarding claims 6-7, 13-14 and 17-18, Klein discloses that the spun fibers may comprise polyester, cotton or blends thereof (column 4, lines 24-46), but Klein does not mention specific percentages that can be used in cotton/polyester conductive spun yarn blends. Klein

does disclose that a typical non-conductive spun blend yarn comprises 35% cotton and 65% polyester (column 4, lines 47-63). Klein also discloses that it is known to vary the amount of conductive fiber in a spun yarn from under 1% to approximately 30% based on the desired conductivity, the size of the conductive filament, and the weight of the spun yarn being used (column 5, lines 18-41). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a spun blend yarn comprising about 65% polyester, about 35% cotton, and about 1% to about 5% conductive spun fibers, because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics and because it is known in the art that varying the amount of the each fiber constituent directly affects properties such as conductivity, strength, and touch.

Regarding claims 7, 14 and 18, considering the substantially identical fabric taught by the prior art, compared to the claimed fabric, it appears that the fabric taught by the prior art would inherently possess the claimed electrical resistance.

The Patent and Trademark Office can require applicants to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 USPQ 431 (CCPA 1977).

5. Claims 2-4, 9-11 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,557,968 to Thornton in view of USPN 4,771,596 to Klein as applied to claims 1, 5-8, 12-14 and 17-18 above, and further in view of USPN 5,305,593 to Rodini et al. (hereinafter referred to as Rodini).

Thornton is silent with regards to specific spinning methods, therefore, it would have been necessary and thus obvious to look to the prior art for conventional spinning methods. Rodini provides this conventional teaching showing that it is known in the static electricity dissipating fabric art to use ring spun yarns, open end spun yarns, or air jet spun yarns (see entire document including column 1, lines 5-12 and lines 59-63, and column 4, lines 17-43). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the spun yarns from ring spun yarns, open end spun yarns, or air jet spun yarns, motivated by the expectation of successfully practicing the invention taught by the applied prior art.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,557,968 to Thornton in view of USPN 4,771,596 to Klein as applied to claims 1, 5-8, 12-14 and 17-18 above, and further in view of USPN 4,255,487 to Sanders.

Klein discloses that conductive spun yarns may comprise metallic or non-metallic fibers (column 4, lines 24-46), but Klein is silent with regards to specific non-metallic conductive fibers. Therefore, it would have been obvious to look to the prior art for conventional conductive non-metallic fiber materials. Sanders discloses that it is known in the antistatic fiber art to use carbon suffused acrylic fibers (see entire document including column 4, lines 36-68). It would have been obvious to one having ordinary skill in the art at the time the invention was made to

make the conductive staple fibers from any suitable conductive material, such as carbon suffused acrylic fibers, as disclosed by Sanders, because the conductive fibers are low-cost, durable, present no problems in the blending and processing with ordinary natural and man-made textile fibers, and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,557,968 to Thornton in view of USPN 4,771,596 to Klein in view of USPN 4,255,487 to Sanders as applied to claim 15 above, and further in view of USPN 6,057,032 to Green.

Thornton is silent with regards to specific staple fiber lengths, therefore, it would have been necessary and thus obvious to look to the prior art for conventional staple fiber lengths. Green provides this conventional teaching showing that it is known in the antistatic fiber art to use staple fibers with lengths of 0.75 to 2.5 inches (see entire document including column 2, lines 58-67 and column 4, lines 57-63). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the staple fibers with a length of 0.75 to 2.5 inches, motivated by the expectation of successfully practicing the invention taught by the applied prior art.

8. Claims 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,557,968 to Thornton in view of USPN 4,771,596 to Klein as applied to claims 1, 5-8, 12-14 and 17-18 above, and further in view of Applicant's Disclosure.

Regarding claims 22-27, Thornton discloses that the fabric may be used as garment in a clean room (column 1, lines 32-63), but Thornton does not mention how the garment portions can be attached. Thornton is silent with regards to specific portion attachment means, therefore,

it would have been necessary and thus obvious to look to the prior art for conventional attachment means. The applicant provides this conventional teaching by disclosing that garments, such as lab coats worn during the assembly of electronic components, are normally formed by the seamed attachment of fabric panels (page 2, lines 16-18). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the garment by attaching seamed panels, because this is the conventional method of forming garments and motivated by the expectation of successfully practicing the invention taught by the applied prior art.

Regarding claims 23-25 and 27, considering the substantially identical fabric taught by the prior art, compared to the claimed fabric, it appears that the fabric taught by the prior art would inherently possess the claimed electrical resistance.

Response to Arguments

9. Applicant's arguments filed 2/2/2006 have been fully considered but they are not persuasive.

The applicant asserts that Thornton teaches away from the use of spun yarns in the base fabric because filament yarns are disclosed as preferred (column 5, lines 16-20). The applicant also asserts that Thornton teaches away from the use of a combination of conductive and non-conductive yarns in the base fabric because non-conductive yarns are preferred (column 5, lines 23-31). Applicant's arguments are not persuasive because all the disclosures in a reference must be evaluated for what they fairly teach one of ordinary skill in the art even though the art teachings relied upon are phased in terms of a non-preferred embodiment or even as being unsatisfactory for the intended purpose, *In re Boe*, 148 USPQ 507 (CCPA 1966); *In re Smith*, 65

USPQ 167 (CCPA 1945); *In re Nehrenberg*, 126 USPQ 383 (CCPA 1960); In re Watanabe, 137 USPQ 350 (CCPA 1963).

The applicant asserts that there is no motivation, beyond the teaching of applicant's own disclosure, to use spun yarns comprising a plurality of electrically conductive staple fibers in spun relation with a plurality of substantially nonconductive natural or synthetic staple fibers wherein the conductive staple fibers are dispersed throughout the spun yarns such that the conductive staple fibers define a network of conductive junctions along the length of the spun yarns and between the spun yarns at locations wherein spun yarns meet. The examiner respectfully disagrees.

Thornton discloses that a combination of conductive and non-conductive yarn may be used in the base fabric (column 5, lines 23-31), but Thornton does not appear to specifically disclose that the yarns may comprise a plurality of electrically conductive staple fibers in spun relation with a plurality of substantially nonconductive natural or synthetic staple fibers wherein the conductive staple fibers are dispersed throughout the spun yarns such that the conductive staple fibers define a network of conductive junctions along the length of the spun yarns and between the spun yarns at locations wherein spun yarns meet. Klein discloses that it is known in the antistatic fiber art to use spun yarns comprising a plurality of electrically conductive staple fibers in spun relation with a plurality of substantially nonconductive natural or synthetic staple fibers wherein the conductive staple fibers are dispersed throughout the spun yarns such that the conductive staple fibers define a network of conductive junctions along the length of the spun yarns and between the spun yarns at locations wherein spun yarns meet (see entire document including column 2, lines 3-16 and column 4, lines 24-46). It would have been obvious to one

having ordinary skill in the art at the time the invention was made to make the conductive spun yarns from any suitable yarn material, such as the yarn material disclosed by Klein, because the yarn provides antistatic properties, and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics.

Regarding claims 8 and 17, the applicant asserts that neither Thornton nor Klein alone teaches or suggests the claimed carbonaceous staple fibers. Applicant's argument is not commensurate in scope with the current rejection because the claims are rejected by Klein in combination with Thornton. Klein discloses that spun yarns may comprise metallic or non-metallic conductive staple fibers (column 4, lines 24-46), but Klein is silent with regards to specific non-metallic conductive material. Therefore, it would have been obvious to look to the prior art for conventional conductive non-metallic fiber materials. Thornton provides this conventional teaching showing that it is known in the antistatic fiber art to use electrically conductive non-metallic carbonaceous material (column 5, line 58 through column 6, line 9). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the conductive staple fibers from carbonaceous staple fibers motivated by the expectation of successfully practicing the invention disclosed by the prior art and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Piziali whose telephone number is (571) 272-1541. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

3/29/06

ANDREW T. PIZIALI
PATENT EXAMINER

atp